Amendments to the Specification:

Please replace the paragraph beginning on page 4, line 27 with the following amended paragraph:

Upon playback, the control information allows the additional audio data to be recombined with the conventional stereo signal in order to reconstruct the original master. This can be done in an augmented CD player or personal computer with the appropriate software. As the conventional two track audio signals can be recorded on a CD in the standard audio tracks, this allows a CD produced by this method to be played on a standard CD player and, conversely, allows existing CDs to be reproduced on an augmented player.

Please replace the paragraph beginning on page 8, line 5 with the following amended paragraph:

As noted above in the Background section, a number of techniques are know for encoding either more channels or information to increase resolution into the conventional audio tracks of a CD. Since the present invention stores additional information separately, preferable in the CD-ROM sector, while still maintaining a back-comparability for the audio tracks, it is, therefore, complementary to these other techniques. As such, they may be combined on a single disk. For example, a high-resolution, multi-channel master recording may encode[d] through, say, a Dolby matrix process to an encoded, but still high-resolution, stereo intermediate stage. This resultant signal could then be recorded on a CD-ROM according to the high-resolution embodiment of the present invention, with the

additional information required to restore the high-resolution (but still encoded) intermediate stage stored in the CD-ROM sector. Upon playback, the original multi-channel, high-resolution signal would the[m]n be recovered by a sequential combination of the corresponding pair of decodings.

Please replace the paragraph beginning on page 11, line 19 with the following amended paragraph:

There are other kinds of dither as well, but these are simple examples which are clearly reversible.

Please replace the paragraph beginning on page 20, line 27 with the following amended paragraph:

In a first embodiment, the process simply stores 1, 2 or more channels of additional audio, then applies a gain matrix to the total number of channels to produce 3, 4, 5, or more output channels of audio. The total number of channels produced is, in this embodiment, exactly equal to the number of channels in the original multi-channel source. Mathematically this maybe described as follows: Let S, and S_2 represent the left and right channels of standard audio on the CD. Let S_3 .. S_n represent the additional channels of audio stored in the CD-ROM track. The ultimate multi-channel output may then be represented as follows:

$$W_j = \sum_{i=1}^{n} g_{\underline{ji}[j]} S_i,$$

where the W represents the multi-channel output signal resulting from the matrix combination of the standard stereo audio on the CD and the additional channels of audio in the CD-ROM track. Note that the number of output channels need not be the same as the total number of channels of audio on the disk so that j=1, ..., *1*, where *1<n*. Some output channels may then need to be "synthesized" by matrix combinations of audio on the disk.

Please replace the paragraph beginning on page 23, line 5 with the following amended paragraph:

The first multi-channel embodiment just discussed stores exactly (n-2) channels of additional audio. This might be termed [this] the "complete" or "perfect" embodiment since it stores the same number of channels as it recovers. The only error, then, is the error inherent in any lossy compression which may possibly be used. There are ways to store fewer than n channels as well. Two examples of how a "less than complete" storage may be accomplished are described in the second and third multi-channel embodiments.

Please replace the paragraph beginning on page 31, line 4 with the following amended paragraph:

In the augmented CD case, the audio data i[d]s first sent to the FIFO 520 but then is sent to a digital signal processor (DSP) 530. DSP 530 is responsible for doing all the calculations necessary to perform the reconstruction of the high-density or multi-channel augmented output, corresponding, respectively, to steps 220, 230, 232, 234, and 240 of Figure 2, or block 430 of Figure 4. There is a control processor 535 that directs the CD transport 510 to read the augmentation data from the CD-ROM zone of the disc. These data are placed in a buffer memory for the augmentation data 525, also organized as a FIFO. The control processor 535 reads the data and instructs the DSP 530 how to perform the reconstruction process. This will require the part of the augmentation data that corresponds to audio data to be sent directly from buffer memory 525 to DSP 530 as well. Once DSP 530 has reconstructed the original recording, it is sent to the D/A converts to supply output 550.

Please replace the paragraph beginning on page 34, line 9 with the following amended paragraph:

This separation of media for the standard stereo and the additional information is useful in a number of situations. It is becoming more common to use[s] a PC to store music in memory, whether downloaded form the internet or elsewhere. By storing the additional information on the PC, this allows a conventional CD to benefit from the above embodiments and also allows[.]_for the use of standard CD player. A PC, say, could then use control information on the hard drive or other memory to reassemble the additional audio

with the standard stereo signal. This would remove the additional space requirements in the CD-ROM sector. Additionally, it would allow already existing CDs to be augmented without the requirement for the CD-ROM zone: By going back to the masters form which the CD was originally made, the supplemental audio tracks and corresponding control information could be produced and supplied separately, allowing the standard CD to be upgraded by being played back with the software.